

CLAIMS

1. Installation for water purification comprising a coagulation zone (1), a flocculation zone (3), a zone  
5 for mixing (5), in an upward current, the flocculated water with pressurized water delivered by a pressurization-pressure release system (8), generating microbubbles, and a flotation zone (6), in the upper part of which the suspended matter brought to the  
10 surface by the microbubbles are discharged, this flotation zone comprising, in its lower part, a means for taking up (10) the clarified water, this installation being characterized in that:
- the geometry of the flotation zone (6) is such that  
15 the ratio of the height (H) of the zone located above the means for taking up (10) clarified water to the length (L) of said zone is between 0.3 and 1;  
and
  - the ratio of the surface area (Sa) of the head of  
20 water above the outlet of the mixing zone (5) to the surface area (Sp) of the flotation zone per se is between 0.05 and 0.5, and preferably between 0.1 and 0.35.
- 25 2. Installation according to Claim 1, characterized in that it comprises means (2) designed so as to homogeneously distribute the raw water coagulated in the coagulation zone (1), over the entire width of the flocculation zone (3).
- 30 3. Installation according to either of Claims 1 and 2, characterized in that the homogenization and the flocculation are provided by a static flocculation system.
- 35 4. Installation according to either of Claims 1 and 2, characterized in that the homogenization and the flocculation are provided by horizontal rotary barriers.

5. Installation according to either of Claims 1 and 2, characterized in that the homogenization and the flocculation are provided by a system of mechanical stirrers on a vertical spindle, calibrated orifices being provided for at the inlet (4) of the mixing zone (5).

6. Installation according to Claim 2, characterized in that the means (2) providing the homogeneous distribution of the raw water over the entire width of the flocculation zone (3) are produced in particular in the form of continuous, crenellated, optionally branched perforated-tube spillways.

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7. Installation according to any one of the preceding claims, characterized in that the system (9) for taking up the clarified water at the base of the flotation zone (6) consists of an intermediate floor with perforations, or of tubes containing holes, setting up turbulent flow conditions within the flotation zone.

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